Math Lesson Plan: Addition / Subtraction
Mary Catherine Searson

Introduction
• **Lesson topic:** Doubles Plus One
• **Length of Lesson:** 90 minutes
• **VA Standards of Learning:** 2.5
  o The student will recall addition facts with sums to 20 or less and the corresponding subtraction facts.
• **Context:** This lesson on doubles plus one is in the middle of the unit on addition and subtraction facts. Students have already worked on counting on, counting back and doubles facts. Their mastery of doubles facts will be utilized and reinforced during this lesson. This is the first lesson on doubles plus one.
• **Global Themes:** This lesson will teach students another fact strategy using a pattern which will help them know more math facts and increase efficiency and automaticity with counting and addition.

Context Objectives
Students will:
• Recite and write doubles plus one facts with sums to 20 or less.

Assessment Aligned to Objectives

<table>
<thead>
<tr>
<th>Objectives</th>
<th>Formative Assessment</th>
<th>Summative Assessment</th>
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<tbody>
<tr>
<td>Recite and write doubles plus one facts with sums to 20 or less.</td>
<td>Students will need to recite the various doubles plus one facts during the teacher station. They may use manipulatives to show how the facts are represented. The teacher will keep notes on which students are able to do so and which need further practice.</td>
<td>The closure activity will have students write out all of their doubles plus one facts in a foldable. The teacher should collect these to check the number correct and see which students have mastered writing their doubles plus one facts.</td>
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Materials/Technology and Advanced Preparation
• Whole Group Mini-Lesson:
  o YouTube video of the doubles song: [http://www.youtube.com/watch?v=M7K3TlO7nK8](http://www.youtube.com/watch?v=M7K3TlO7nK8)
  o Set of unifex cubes for each student
  o Addition fact tables
• Stations:
- Unifex cubes
- Computers
- Ten frame cards, counters, hundreds charts (Doubles Plus One Snap)
- One die, game markers or counters, game board for each player (Counting Bugs)

- **Closure:** Doubles plus one foldable

- *Advanced preparation:* Print out handouts and game pieces. Set up stations.

## Teaching and Learning Sequence

<table>
<thead>
<tr>
<th>Time</th>
<th>Teacher Activities</th>
<th>Student Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Introduction</strong></td>
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| 5 minutes | • Gather students on the carpet for the lesson.  
Tell them we will be using the doubles song we have been practicing.  
Play the video with the words so that children can follow along and sing out loud with the song of doubles facts.  
([http://www.youtube.com/watch?v=M7K3TlO7nK8](http://www.youtube.com/watch?v=M7K3TlO7nK8))  

• Reveal the “Problem of the Day.”  Talk to students about how the past few daily problems have been doubles facts but today it is something new and different!  It is related to doubles facts but they will be learning a new fact strategy.  
  - Example problem: 7+8 = ?  

• Tell students to think about their answer but do not answer yet.  Because it is a new concept, it will be discussed during the mini-lesson.  

• Students will join the teacher on the carpet for the whole-group lesson.  They will sing along to the doubles facts song.  

• Students will think about their answer to the problem of the day but not share it with the class yet.  |
| **Whole Class Mini-Lesson**                                                                                     |
| 30 minutes | • Ask for a volunteer to model one way we know how to answer the problem, by counting one-by-one on their fingers to get to an answer.  

• Discuss with students how that took a long time, especially since we have been learning how to add up two numbers fast.  

• Ask the class for the doubles fact of 7+7.  
Since that equals 14, ask for the answer to 14+1.  Ask the class if they got the same answer as when we counted one-by-one.  Yes!  

• Students will count one-by-one with the student volunteer to get the answer to 7+8.  The students will listen and follow along as the teacher explains the doubles fact plus one strategy to the class and shows how a number line represents the equation.  
Students may ask any questions they may have during the lesson.  |
- This is called doubles plus one.
- **Show how this is achieved with a number line.** Draw on chalkboard so that students can visualize “jumping” half way there and then one more small single “jump” to get to the answer. For example, starting at 7, jump to 14. To get to the answer of 15, they only have to add in one small jump.

- **Ask students to return to their seats so we can see how this new strategy can be represented with our manipulatives.** Ask students work with their elbow partners to show $4 + 4$ using their unifex cubes and write on their dry erase board the equation this represents. Have each pair hold up their unifex cubes and the board up in the air when they’re finished to check for correctness (*Good Questions for Math Teaching*, p. 14). Next, ask them to add one unifex cube to one of the sets of 4 block. Ask them to modify their equation with their partner to represent the addition of one new block and hold up their dry erase board. Visually check for correct answers.

- **Pass out a copy of addition fact tables to each student.** They should already be familiar with this from previous lessons. Instruct them and model how to represent their new strategy on the table: draw a diagonal line down the middle of the chart from zero to twenty. Have students then circle or color in the numbers on either side of the diagonal line. Students should keep this for reference.

- **Ask students to analyze their table and look to see if they can find an additional equation that would represent 15.** If students are not coming up with the idea of using subtraction ($8 + 8 - 1$), show them using the table.

- **Spend a few minutes going over some of the doubles plus (or minus) one facts with the class.** Students will return to their seats and get out the unifex cubes. They will follow along as the teacher models a doubles fact with the unifex cubes and they will do the same with their cubes. The students will write out the full equation made with the unifex cubes on their dry erase boards and hold their boards up when they are all finished. The teacher will ask students to add one additional cube to one rod and the students will do so and modify their dry erase board equation to represent the new equation.

- **Students will follow along as the teacher models how to represent doubles plus one facts on the addition fact tables.** Students will draw the appropriate lines and circles that the teacher asks them to on their table to include all sums of doubles plus one facts adding up to 20 or less.

- **Students will use their charts to think about another way to get to the same answer.** They may share their ideas or brainstorm with an elbow partner.
The next portion of the lesson will be in station, so the teacher will need to explain and model the stations and break the class into four groups, assigning each group to a station. Each station will last 10 minutes, with one minute to change stations. A timer will be displayed on the SmartBoard so that students will know when there is 1 minute left (pack-up time) and when it is time to change to the next station, going in order from Station 1 – Station 4.

| 45 minutes | **Station 1 – Teacher Station**  
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<td>• The teacher will pass out unifex doubles to each student (a different double fact to each), and then pass out a single white cube that they will need to attach to one of their rods. The teacher may model this first. The teacher will then ask each student what their double fact is and what their double plus one fact is. For more advanced groups, the teacher may also include the double minus one facts as shown with the unifex cubes. Repeat with additional doubles plus one facts and note which students are able to recite the facts using the cubes.</td>
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| **Station 2 – Partner work**  
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<td>• Students will work in partners to play the game “Doubles Plus 1 Snap.” They will need ten frame cards, counters, and a hundreds chart. The first player chooses a ten frame card from the upside-down pile and shows the card. The player that first says the double plus one fact wins the card and puts a counter on the hundreds chart. The player with the most cards at the end is the winner. Both players should look at the hundreds chart after the game to notice which numbers were covered up and what patterns, if any, they can find.</td>
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| **Station 3 – Computer station**  
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<td>• Students will play Dinosaur Dentist on the computer to practice their doubles plus one facts. It shows the two numbers in the double, asks them to add one and click on the correct answer. <a href="http://www.ictgames.com/dinosaurDentist/">http://www.ictgames.com/dinosaurDentist/</a></td>
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| **Station 4 – Partner work**  
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<td>• Students will play Catching Bugs in pairs. Each player takes turns rolling the die. The player needs to double the number, add one and then cover the number on their card. The first player to cover all of their numbers is the winner.</td>
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**Closure**
| 10 minutes | • Students will return to their seats at the end of the station time and conclude the lesson by creating a double plus one foldable. They need to write in the answer for each doubles plus one equation on the inside of the foldable to complete it. |
|  | • Students will return to their seats and work on creating a foldable for the doubles plus one facts. They will also need to complete the foldable by writing the sum of each fact inside of the foldable. |

References


This text was helpful in deciding to include a number line as an additional visual for students to see how doubles plus one facts are represented. In addition to providing a linear representation of numbers, the text also points out that it helps students by furnishing both a concrete and pictorial representation of the number system that evolves into a mental model. (pg. 7)

After reading this text, I modified my lesson plan slightly to include time for students to work with partners on coming up with an equation for their dry erase board during the whole group mini-lesson. This helps to organize the learning process and is better suited for posing questions to groups to work on together based on how their progress is coming along. (pages 12-14)

4. Addition Strategies Doubles Plus one, Better Lesson, Marcello Sgambarluri,  

5. Doubles Plus 1 Snap, Mindfull Wordpress,  

6. Catching Bugs Doubles Plus One, Teachers Pay Teacher, Teach With Laughter,  

7. Frugal in First, Trouble with Doubles!, Melissa P. and Brittany P.,  
### Lesson Organizer

<table>
<thead>
<tr>
<th>Prior Knowledge and NEW Instructional Content</th>
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#### Prior Knowledge

- Students have already learned counting on, counting back and doubles facts.
- Students understand that addition involves combining and subtraction involves separating.

#### NEW Instructional Content

- Students will utilize a new fact strategy to assist in adding and subtracting with efficiency, accuracy, and automaticity.
- Students will represent their new strategy using a multitude of manipulatives.

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<tr>
<th>Instructional Modifications to ASSIST Students</th>
<th>Main Events of Instruction</th>
<th>Instructional Modifications to CHALLENGE Students</th>
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<tr>
<td>• Students that need assistance can complete a worksheet with the help of the teacher or a classmate so that they have all of the doubles plus one facts written out in front of them. They can use these throughout the lesson and stations to reference and assist them.</td>
<td>• The main events of instruction is using manipulatives to represent doubles plus one facts. Students will use a number line, unifex cubes, an addition fact table, and a hundreds chart to learn and practice the doubles plus one facts with sums equal to or less than twenty.</td>
<td>• Students that easily grasp this concept and need more of a challenge will be asked to use unifex cubes to represent doubles minus one facts.</td>
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